

CLAIMS

I claim:

1. A motor vehicle door attachment and detachment system, comprising:

a. a door with an upper hinge element and a lower hinge element,

b. a vertical frame member located adjacent to a door opening on a motor vehicle, said vertical frame member including a longitudinally aligned cavity;

c. a removable intermediate member located inside said cavity of said vertical frame member;

d. at least two complimentary shaped door hinge elements vertically aligned and securely attached to front surface of said intermediate member capable of attaching to said upper hinge element and lower hinge element on said door;

e. two electro-mechanical locks located inside said cavity formed in said vertical frame member, said locks being used to securely hold said intermediate member inside said cavity of said frame member; and

f. a sensor located in the motor vehicle and coupled to said locks, said sensors capable of detecting an impact and transmitting a signal to said locks to detach said intermediate member from said cavity when an impact occurs.

2. The motor vehicle door attachment and detachment system electro mechanic device as set forth in claim 1, further including each said lock includes a tongue that engages a slot formed on said intermediate member.

3. The motor vehicle door attachment and detachment system electro mechanic device as set

1 forth in claim 1, wherein said door hinge elements are attached to the external surface of said
2 intermediate member,

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4 4. The motor vehicle door attachment and detachment system as set forth in claim 1, wherein
5 said intermediate members are detachable from said cavity in said vertical frame member
6 after said locks are unlocked from said intermediate member, which in turn results in the
7 removal of the door hinges away from the motor vehicle body, therefore the doors can be
8 detached from the motor vehicle even if doors are jammed at door frames, posts or locks and
9 even if the hinges cause difficulty in opening the doors and even if there is direct damage to
10 the doors as a result of a frontal or rear end or any angle side impact accident, therefore can
11 save the rescue and medical personnel time.

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13 5. The motor vehicle door attachment and detachment system as set forth in claim 1, wherein
14 said intermediate members are held in a fixed position in said cavity when the vehicle is
15 involved in an accident by fasteners attached to said vertical frame member inside said cavity,
16 said fasteners may be broken to release said intermediate member from said cavity.

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18 6. The motor vehicle door attachment and detachment system as recited in claim 5, wherein
19 fasteners are made of plastic.

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21 7. The motor vehicle door attachment and detachment system as set forth in claim 1, wherein
22 said intermediate members are used as a means to move the door hinges with their
23 intermediate member base on which the hinges are fixed, said intermediate member and said

1 same electro mechanic unlocking mechanism are also applied for the back doors, where said
2 electro mechanic devices and intermediate members - upper and lower parts - are within the
3 two side vertical frame members.
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5 8. The motor vehicle door attachment and detachment system as set forth in claim 1, wherein
6 said intermediate members that are unlocked and removed in the case of an accident, can be
7 replaced and locked into their respective cavities along with the doors after the structural
8 damage is repaired.
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10 9. The motor vehicle door attachment and detachment system as set forth in claim 1, further
11 including an expulsion mechanism attached to said vertical frame member and inside said
12 cavity to forcibly expulse said intermediate member from said cavity after said locking
13 mechanism is activated to unlock said intermediate member from said cavity.
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15 10. The motor vehicle door attachment and detachment system as recited in claim 9, wherein
16 said expulsion mechanism includes at least one spring located between said vertical frame
17 member and said intermediate member.
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19 11. The motor vehicle door attachment and detachment system as set forth in claim 9, further
20 including an activation button coupled to said expulsion means that selectively controls said
21 expulsion system.
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1 12. The motor vehicle door attachment and detachment system, as set forth in claim 1,
2 wherein said intermediate members are only held inside the cavity by said tongues, thereby
3 enabling the doors to be removed and attached to said vehicle without the use of nuts and
4 bolts and having to disengage the hinges.

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6 13. A method of loading and unloading cargo from a motor vehicle comprised of the
7 following steps:

8 a. assembling a door attachment and detachment system on a motor vehicle, said
9 door attachment and detachment system including a door with an upper hinge element and a
10 lower hinge element, a vertical frame member located adjacent to a door opening on a motor
11 vehicle, said vertical frame member including a longitudinally aligned cavity, a removable
12 intermediate member located inside said cavity of said vertical frame member, at least two
13 complimentary shaped door hinge elements vertically aligned and securely attached to front
14 surface of said intermediate member capable of attaching to said upper hinge element and
15 lower hinge element on said door, two electro-mechanical locks located inside said cavity
16 formed in said vertical frame member, said locks being used to securely hold said
17 intermediate member inside said cavity of said frame member, and a sensor located in the
18 motor vehicle and coupled to said locks, said sensors capable of detecting an impact and
19 transmitting a signal to said locks to detach said intermediate member from said cavity when
20 an impact occurs.

21 b. selecting cargo to be loaded into said motor vehicle;

22 c. detaching said intermediate member from said cavity of said vertical frame member
23 thereby enabling said door to be removed;

- 1 d. loading said cargo into said motor vehicle;
- 2 e. attaching said intermediate member to said vertical frame member to attach said
- 3 door to said motor vehicle;
- 4 f. delivering said motor vehicle to a desired location;
- 5 g. detaching said intermediate member from said motor vehicle to removed said door
- 6 from said motor vehicle;
- 7 h. unloading said cargo from said motor vehicle; and,
- 8 i. attaching said intermediate member to said motor vehicle to attach said doors to
- 9 said motor vehicles.

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11 14. A method of attachment and detachment of doors to provide such a system that does not

12 require the use of nuts and bolts to attach or detach doors and closures and does not need

13 removal of the hinges at factory assembly-paint- and paint and body repair shops repeated

14 detachment-attachment conditions.

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